09/485601
STN Search Summary

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=> d his

     FILE 'CAPLUS, BIOSIS' ENTERED AT 15:23:28 ON 10 JAN 2001
L1         55884 S RHO
L2         63126 S RHO OR RAC OR RAC1 OR CDC42
L3           880 S ?BOTULINUM (S) (C3 OR C2)
L4         63499 S L2 OR L3
L5         77612 S CNS OR (CENTRAL NERVOUS SYSTEM) OR AXON
L6       1299392 S CNS OR (CENTRAL NERVOUS SYSTEM) OR AXON OR NERV? OR NEURON?
L7          1247 S L4 AND L6
L8           787 S L7 AND PD<1999
L9           649 DUP REM L8 (138 DUPLICATES REMOVED)
L10            9 S L9 AND (REGROW? OR REGENERAT?)
L11          130 S L9 AND (REGROW? OR REGENERAT? OR GROW? OR GENERAT?)
L12           62 S L11 AND INHIBIT?

L10  ANSWER 5 OF 9  BIOSIS  COPYRIGHT 2001 BIOSIS
AN   1999:80468  BIOSIS
TI   Regeneration of adult rat retinal ganglion cell (RGC) axons after
     microlesion and inactivation of the GTPase RHO by treatment with C3 enzyme.
AU   Selles-Navarro, I.; Fournier, A.; Dergham, P.; Lehmann, M.; McKerracher, L.
SO   Society for Neuroscience Abstracts, (1998) Vol. 24, No. 1-2, pp. 1560.
     Meeting Info.: 28th Annual Meeting of the Society for Neuroscience, Part 2
     Los Angeles, California, USA November 7-12, 1998

L10  ANSWER 8 OF 9  BIOSIS  COPYRIGHT 2001 BIOSIS
AN   1998:21076  BIOSIS
TI   Role of  ***Rho***  in regulating inhibition of neurite growth by
     myelin-associated glycoprotein (MAG.
AU   Lehmann, M.; Fournier, A.; Leclerc, N.; Tigyi, G.; McKerracher, L.
SO   Molecular Biology of the Cell, (Nov., 1997) Vol. 8, No. SUPPL., pp. 284A.
Meeting Info.: 37th Annual Meeting of the American Society for Cell Biology
Washington, D.C., USA December 13-17, 1997 American Society for Cell Biology

L12  ANSWER 9 OF 62  CAPLUS  COPYRIGHT 2001 ACS
AN   1998:289265  CAPLUS
TI   Microinjection of activated phosphatidylinositol-3 kinase induces process
     outgrowth in rat PC12 cells through the Rac-JNK signal transduction pathway
AU   Kita, Yoshihiro; Kimura, Koutarou D.; Kobayashi, Michimoto; Ihara, Sayoko;
     Kaibuchi, Kozo; Kuroda, Shinya; Ui, Motoyasu; Iba, Hideo; Konishi,
     Hiroaki; Kikkawa, Ushio; Nagata, Satoshi; Fukui, Yasuhisa
SO   J. Cell Sci. (  ***1998***  ), 111(7), 907-915

L12  ANSWER 15 OF 62  CAPLUS  COPYRIGHT 2001 ACS
AN   1998:79020  CAPLUS
TI   p160 RhoA-binding kinase ROK.alpha. induces neurite retraction
AU   Katoh, Hironori; Aoki, Junko; Ichikawa, Atsushi; Negishi, Manabu
SO   J. Biol. Chem. (  ***1998***  ), 273(5), 2489-2492

L12  ANSWER 19 OF 62  CAPLUS  COPYRIGHT 2001 ACS
AN   1997:686625  CAPLUS
TI   Regulation of dendritic growth and remodeling by Rho, Rac, and Cdc42
AU   Threadgill, Richard; Bobb, Kathryn; Ghosh, Anirvan
SO   Neuron (  ***1997***  ), 19(3), 625-634
```

L12 ANSWER 23 OF 62 CAPLUS COPYRIGHT 2001 ACS
AN 1997:232505 CAPLUS
TI Rac is required for growth cone function but not neurite assembly
AU Lamoureux, Phillip; Altun-Gultekin, Zeynep F.; Lin, Chingju; Wagner, John A.; Heidemann, Steven R.
SO J. Cell Sci. (***1997***), 110(5), 635-641

L12 ANSWER 24 OF 62 CAPLUS COPYRIGHT 2001 ACS
AN 1997:135165 CAPLUS
TI Rho family GTPases and neuronal growth cone remodelling: relationship between increased complexity induced by Cdc42Hs, Rac1, and acetylcholine and collapse induced by RhoA and lysophosphatidic acid
AU Kozma, Robert; Sarner, Shula; Ahmed, Sohail; Lim, Louis
SO Mol. Cell. Biol. (***1997***), 17(3), 1201-1211

L12 ANSWER 26 OF 62 CAPLUS COPYRIGHT 2001 ACS
AN 1996:516059 CAPLUS
TI The GTPase-activating protein n-chimaerin cooperates with ***Rac1*** and Cdc42Hs to induce the formation of lamellipodia and filopodia
AU Kozma, Robert; Ahmed, Sohail; Best, anthony; Lim, Louis
SO Mol. Cell. Biol. (***1996***), 16(9), 5069-5080

L12 ANSWER 27 OF 62 CAPLUS COPYRIGHT 2001 ACS
AN 1996:312115 CAPLUS
TI Src, Ras, and ***Rac*** mediate the migratory response elicited by NGF and PMA in PC12 cells
AU Altun-Gultekin, Z. F.; Wagner, J. A.
SO J. Neurosci. Res. (***1996***), 44(4), 308-327

L12 ANSWER 28 OF 62 CAPLUS COPYRIGHT 2001 ACS
AN 1996:75463 CAPLUS
TI Lysophosphatidic acid-induced neurite retraction in PC12 cells: control by phosphoinositide-Ca2+ signaling and ***rho***
AU Tigyi, Gabor; Fischer, David J.; Sebok, Agnes; Yang, Charles; Dyer, David L.; Miledi, Ricardo
SO J. Neurochem. (***1996***), 66(2), 537-48

L12 ANSWER 36 OF 62 CAPLUS COPYRIGHT 2001 ACS
AN 1993:184390 CAPLUS
TI Evidence for an indirect effect of ***nerve*** ***growth*** factor (NGF) on the ADP-ribosylation of a 22 kDa rho-like protein in PC12 cells
AU Takahashi, Hideo; Guroff, Gordon
SO Biochem. Biophys. Res. Commun. (***1993***), 190(3), 1156-62

L12 ANSWER 42 OF 62 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1999:18232 BIOSIS
TI Opposing mutants of ***RAC1*** ***inhibit*** motor ***neuron*** ***growth*** cone collapse induced by myelin or collapsin-1.
AU Kuhn, T. B. (1); Wilcox, C. L.; Raper, J. A.; Bamburg, J. R. (1)
SO Molecular Biology of the Cell, (***Nov., 1998***) Vol. 9, No. SUPPL., pp. 142A. Meeting Info.: 38th Annual Meeting of the American Society for Cell Biology San Francisco, California, USA December 12-16, 1998 American Society for Cell Biology

L6 ANSWER 3 OF 5 MEDLINE
AN 1999389883 MEDLINE
DN 99389883 PubMed ID: 10460260
TI Inactivation of Rho signaling pathway promotes CNS **axon regeneration.**
AU Lehmann M; Fournier A; Selles-Navarro I; Dergham P; Sebok A; Leclerc N; Tigyi G; McKerracher L
CS Departement de Pathologie et Biologie Cellulaire, Universite de Montreal, Succursale Centreville, Montreal, Quebec H3C 3J7, Canada.
SO JOURNAL OF NEUROSCIENCE, (1999 Sep 1) 19 (17) 7537-47.
Journal code: 8102140. ISSN: 1529-2401.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199909
ED Entered STN: 19991005
Last Updated on STN: 20010521
Entered Medline: 19990923
AB Regeneration in the CNS is blocked by many different growth inhibitory proteins. To foster **regeneration**, we have investigated a strategy to block the **neuronal** response to **growth** inhibitory signals. Here, we report that injured **axons** regrow directly on complex **inhibitory** substrates when **Rho** GTPase is inactivated. Treatment of PC12 cells with C3 enzyme to inactivate Rho and transfection with dominant negative **Rho** allowed **neurite growth** on **inhibitory** substrates. Primary retinal **neurons** treated with C3 extended **neurites** on myelin-associated glycoprotein and myelin substrates. To explore **regeneration** in **vivo**, we crushed optic **nerves** of adult rat. After C3 treatment, numerous cut axons traversed the lesion to regrow in the distal white matter of the optic nerve. These results indicate that targeting signaling mechanisms converging to **Rho** stimulates **axon regeneration** on **inhibitory** CNS substrates.

Post - inventors.

09/485601
STN Search Summary

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     FILE 'CAPLUS, BIOSIS' ENTERED AT 16:24:47 ON 10 JAN 2001
L1          8991 S ?BOTULINUM
L2           334 S C3 (2W) ?TRANSFERASE?
L3          1850 S ?EXOENZYME?
L4          2109 S L2 OR L3
L5           387 S C3 (2W) ?EXOENZYME?
L6           678 S L2 OR L5
L7           386 S L1 (S) L6
L8           342 S L7 AND RHO?
L9           325 S L7 AND RHO
L10          254 S L8 AND PD<1999
L11          148 DUP REM L10 (106 DUPLICATES REMOVED)
L12           92 S L11 AND INHIBIT?
L13            9 S L12 AND (CNS OR (CENTRAL NERVOUS SYSTEM) OR AXON? OR NEURON?
OR NERV?)

L13  ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2001 ACS
AN   1998:517015  CAPLUS
TI   p21RhoA and p21RhoA binding proteins as regulators of lysophosphatidic
     acid (LPA)-induced changes in  ***neuronal***  morphology
AU   Gibbink, Martijn F. B. G.; Kranenburg, Onno; Jalink, Kees; Postma, Friso
     R.; Poland, Mieke; Houssa, Brahim; Oomen, Lauren; Van Horck, Francis P.
     G.; Moolenaar, Wouter H.
SO   Kinases Phosphatases Lymphocyte Neuronal Signaling (  ***1997***  ),
     235-241.  Editor(s): Yakura, Hidetaka. Publisher: Springer, Tokyo, Japan.
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#16 attachment 09/485601 ss dec (1)

1: Mol Cell Biol 1998 Dec;18(12):6962-70

p21(WAF1/CIP1) is upregulated by the geranylgeranyltransferase I inhibitor GGTI-298 through a transforming growth factor beta- and Sp1-responsive element: involvement of the small GTPase rhoA.

Adnane J, Bizouarn FA, Qian Y, Hamilton AD, Sebti SM.

Drug Discovery Program, H. Lee Moffitt Cancer Center, and Department of Biochemistry and Molecular Biology, University of South Florida, Tampa, Florida 33612, USA.

We have recently reported that the geranylgeranyltransferase I inhibitor GGTI-298 arrests human tumor cells at the G1 phase of the cell cycle and increases the protein and RNA levels of the cyclin-dependent kinase inhibitor p21(WAF1/CIP1). Here, we show that GGTI-298 acts at the transcriptional level to induce p21(WAF1/CIP1) in a human pancreatic carcinoma cell line, Panc-1. This upregulation of p21(WAF1/CIP1) promoter was selective, since GGTI-298 inhibited serum responsive element- and E2F-mediated transcription. A functional analysis of the p21(WAF1/CIP1) promoter showed that a GC-rich region located between positions -83 and -74, which contains a transforming growth factor beta-responsive element and one Sp1-binding site, is sufficient for the upregulation of p21(WAF1/CIP1) promoter by GGTI-298. Electrophoretic mobility shift assays showed a small increase in the amount of DNA-bound Sp1-Sp3 complexes. Furthermore, the analysis of Sp1 transcriptional activity in GGTI-298-treated cells by using GAL4-Sp1 chimera or Sp1-chloramphenicol acetyltransferase reporter revealed a significant increase in Sp1-mediated transcription. Moreover, GGTI-298 treatment also resulted in increased Sp1 and Sp3 phosphorylation. These results suggest that GGTI-298-mediated upregulation of p21(WAF1/CIP1) involves both an increase in the amount of DNA-bound Sp1-Sp3 and enhancement of Sp1 transcriptional activity. To identify the geranylgeranylated protein(s) involved in p21(WAF1/CIP1) transcriptional activation, we analyzed the effects of the small GTPases Rac1 and RhoA on p21(WAF1/CIP1) promoter activity. The dominant negative mutant of RhoA, but not Rac1, was able to activate p21(WAF1/CIP1). In contrast, constitutively active RhoA repressed p21(WAF1/CIP1). Accordingly, the ADP-ribosyl transferase C3, which specifically inhibits Rho proteins, enhanced the activity of p21(WAF1/CIP1). Taken together, these results suggest that one mechanism by which GGTI-298 upregulates p21(WAF1/CIP1) transcription is by preventing the small GTPase RhoA from repressing p21(WAF1/CIP1) induction.

PMID: 9819384 [PubMed - indexed for MEDLINE]